



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Self-actuating Backflow Protector EKO-BSV2 & EKO-BSV5, Ekovent AB EPD of multiple products, based on the results of a representative product



EPD HUB, HUB-2517 Published on 22.02.2025, last updated on 22.02.2025, valid until 21.02.2030



Created with One Click LCA





EKOVENT®

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Ekovent AB
Address	Mejselgatan 7, Vellinge, Sweden
Contact details	info@ekovent.se
Website	www.ekovent.se

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Van Dong
EPD verification	Independent verification of this EPD and data, according to ISO 14025: □ Internal verification ☑ External verification
EPD verifier	Haiha Nguyen, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	EKO-BSV2 & EKO-BSV5
Additional labels	Appendix 1
Product reference	-
Place of production	Vellinge, Sweden
Period for data	2023
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	N/A

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of EKO-BSV5-125
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	4,30E+00
GWP-total, A1-A3 (kgCO ₂ e)	4,26E+00
Secondary material, inputs (%)	21.3
Secondary material, outputs (%)	83.2
Total energy use, A1-A3 (kWh)	17
Net freshwater use, A1-A3 (m ³)	0.03



PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

EKOVENT is one of Sweden's leading companies and has for more than 50 years developed, manufactured, and marketed products for ventilation and fire protection.

PRODUCT DESCRIPTION

The EKO-BSV self-actuating backflow protector prevents smoke spread in ventilation systems. It is made of galvanized steel, available in sizes $\emptyset 100-\emptyset 315$ mm, and fire-tested according to EN 1366-2.

The product is type-approved (SC0800-14) and complies with tightness class C for BSV2 and BSV5, and tightness class B for BSV1 and BSV4, as per EN 1751. It withstands differential pressures up to 2500 Pa and complies with environmental class C2. Fire resistance corresponds to E90 when installed outside the fire-exposed cell in ducts passing through walls or floors.

This EPD covers multiple product sizes in the EKO-BSV2 and EKO-BSV5 series. See the table for details on product names, GTIN numbers, and weights. GWP-total, GWP-GHG, and GWP-fossil values for all sizes, are presented in Appendix 1.

The data used in this EPD are calculated based on one kilogram of the representative product, EKO-BSV5-125.

Further information can be found at www.ekovent.se.

Article	GTIN	Article weight [kg/piece]
EKO-BSV2-100	07350139874465	1,07
EKO-BSV2-125	07350139874472	1,32
EKO-BSV2-160	07350139874489	1,84
EKO-BSV2-200	07350139874496	2,93
EKO-BSV2-250	07350139874502	4,40

PRODUCT IDENTIFICATION

EKO-BSV2-315

EKO-BSV5-100	07350139874526	1,85
EKO-BSV5-125	07350139874533	2,28
EKO-BSV5-160	07350139874540	3,05
EKO-BSV5-200	07350139874557	4,90
EKO-BSV5-250	07350139874465	7,17
EKO-BSV5-315	07350139874472	10,23

07350139874519

6.77





PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	96,1	Europe & Asia
Minerals		
Fossil materials	3,9	Europe & Asia
Bio-based materials		

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

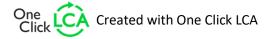
Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.104

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of EKO-BSV5
Mass per declared unit	1 kg
Functional unit	-
Reference service life	-

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).





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PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Pro	oduct stage		Assembly stage		Use stage End of life s					ife sta	ge	s	yond f systen undar	1 I				
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	С3	C4		D	
×	×	×	×	×	MND	MND	MND	MND	MND	MND	MND	×	×	×	×		×	
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The product stage (A1-A3) evaluates the environmental impact associated with raw materials, packaging, and assembly. This includes the sourcing and processing of steel, plastics and rubber for purchased components, as well as transportation and energy use. As all components are pre-manufactured by external suppliers, no waste is generated during the assembly process at our facility.

A1 covers the extraction of raw materials and the production of semifinished components, which are fully manufactured by external suppliers. A2 includes the transportation of these components to the assembly site in Vellinge.

At this site, the final product is assembled by hand. A3 includes the use of 100% wind energy for electricity and biogas for heating. The finished product is packed in a manner appropriate for its specific size, using materials such as wooden pallets and cardboard.





TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

A4 includes the transportation of the product and its packaging, shipped on pallets, to the installation site. An average transportation distance of 425 km is assumed. A5 covers the installation of the product, which is assumed to be done by hand without any complex procedures. No material losses are expected during the installation process. Waste management of the packaging is also included, where the cardboard is assumed to be 90% recycled and 10% sent to landfill, while the wooden pallet is incinerated with energy recovery.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase. Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

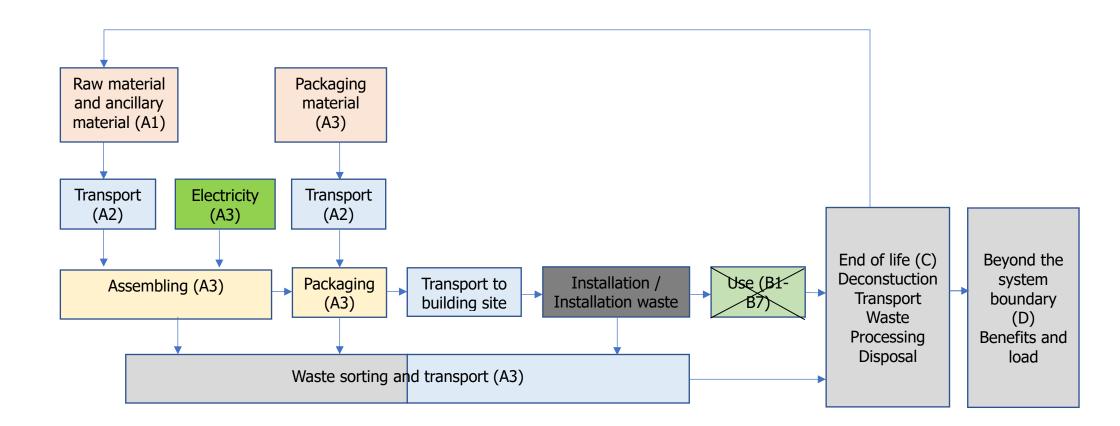
The deconstruction/demolition of the product is considered negligible as it can be performed manually. For transportation to a local recycling center, a distance of 50 km is assumed, with transport carried out by lorry as specified in C2.

The recycling process for steel is covered in C3 and C4, with an assumed recycling rate of 85% and a landfill rate of 15%. Module D includes the environmental impacts of steel recycling. For plastics and rubber, it is assumed that 70% is incinerated, while the remaining 30% is recycled. The benefits and loads from energy recovery processes for packaging materials are included in Module D.





MANUFACTURING PROCESS AND SYSTEM BOUNDARY







LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	Allocated by mass or volume
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	N/A

This EPD is product and factory specific and does not contain average calculations.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data.



ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS - EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	СЗ	C4	D
GWP – total ¹⁾	kg CO₂e	4,14E+00	1,23E-01	1,04E-04	4,26E+00	9,84E-02	4,90E-02	MND	0,00E+00	9,51E-03	5,95E-02	8,99E-04	-1,42E+00						
GWP – fossil	kg CO₂e	4,14E+00	1,23E-01	4,11E-02	4,30E+00	9,84E-02	5,34E-03	MND	0,00E+00	9,51E-03	5,94E-02	8,99E-04	-1,42E+00						
GWP – biogenic	kg CO₂e	0,00E+00	0,00E+00	-4,37E-02	-4,37E-02	0,00E+00	4,37E-02	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,21E-05						
GWP – LULUC	kg CO₂e	2,91E-03	6,37E-05	2,64E-03	5,61E-03	3,53E-05	1,70E-06	MND	0,00E+00	3,41E-06	2,54E-05	5,14E-07	1,54E-04						
Ozone depletion pot.	kg CFC- 11e	6,24E-08	1,85E-09	8,93E-10	6,52E-08	1,96E-09	7,97E-11	MND	0,00E+00	1,89E-10	2,72E-10	2,60E-11	-7,38E-09						
Acidification potential	mol H⁺e	2,14E-02	3,15E-03	2,42E-04	2,48E-02	2,05E-04	3,75E-05	MND	0,00E+00	1,98E-05	2,33E-04	6,37E-06	-6,37E-03						
EP-freshwater ²⁾	kg Pe	8,85E-04	4,52E-06	1,99E-05	9,09E-04	6,62E-06	1,51E-06	MND	0,00E+00	6,40E-07	1,25E-05	7,39E-08	-6,08E-04						
EP-marine	kg Ne	3,61E-03	7,84E-04	6,85E-05	4,46E-03	4,92E-05	1,85E-05	MND	0,00E+00	4,75E-06	5,66E-05	2,43E-06	-1,42E-03						
EP-terrestrial	mol Ne	4,97E-02	8,70E-03	6,44E-04	5,90E-02	5,30E-04	1,79E-04	MND	0,00E+00	5,13E-05	5,97E-04	2,65E-05	-1,68E-02						
POCP ("smog") ³)	kg NMVOCe	1,45E-02	2,39E-03	1,97E-04	1,70E-02	3,40E-04	4,98E-05	MND	0,00E+00	3,29E-05	1,76E-04	9,50E-06	-5,18E-03						
ADP-minerals & metals ⁴)	kg Sbe	2,08E-04	1,60E-07	8,01E-07	2,09E-04	3,27E-07	1,39E-08	MND	0,00E+00	3,17E-08	1,33E-06	1,43E-09	-1,33E-05						
ADP-fossil resources	MJ	4,66E+01	1,54E+00	3,23E+00	5,13E+01	1,38E+00	5,98E-02	MND	0,00E+00	1,34E-01	2,67E-01	2,21E-02	-1,31E+01						
Water use ⁵⁾	m³e depr.	1,22E+00	4,83E-03	1,71E-01	1,39E+00	6,88E-03	6,68E-03	MND	0,00E+00	6,65E-04	7,01E-03	6,37E-05	-2,49E-01						

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.





USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	С3	C4	D
Renew. PER as energy ⁸⁾	MJ	5,12E+00	1,40E-02	4,84E+00	9,97E+00	2,42E-02	- 3,69E+00	MND	0,00E+00	2,34E-03	4,84E-02	2,13E-04	-4,54E+00						
Renew. PER as material	MJ	2,94E-01	0,00E+00	4,28E-01	7,22E-01	0,00E+00	-4,28E-01	MND	0,00E+00	0,00E+00	-2,94E-01	0,00E+00	0,00E+00						
Total use of renew. PER	MJ	5,41E+00	1,40E-02	5,27E+00	1,07E+01	2,42E-02	- 4,12E+00	MND	0,00E+00	2,34E-03	-2,45E-01	2,13E-04	-4,54E+00						
Non-re. PER as energy	MJ	4,65E+01	1,54E+00	3,22E+00	5,12E+01	1,38E+00	5,98E-02	MND	0,00E+00	1,34E-01	- 1,17E+00	2,21E-02	-1,31E+01						
Non-re. PER as material	MJ	1,21E-01	0,00E+00	7,99E-03	1,29E-01	0,00E+00	-7,99E-03	MND	0,00E+00	0,00E+00	-1,21E-01	0,00E+00	0,00E+00						
Total use of non-re. PER	MJ	4,66E+01	1,54E+00	3,23E+00	5,14E+01	1,38E+00	5,18E-02	MND	0,00E+00	1,34E-01	- 1,29E+00	2,21E-02	-1,31E+01						
Secondary materials	kg	2,13E-01	7,30E-04	7,02E-03	2,20E-01	6,42E-04	7,97E-05	MND	0,00E+00	6,21E-05	3,94E-04	5,55E-06	7,68E-01						
Renew. secondary fuels	MJ	3,16E-02	2,77E-06	4,20E-03	3,58E-02	8,12E-06	3,43E-07	MND	0,00E+00	7,85E-07	1,50E-05	1,15E-07	1,36E-03						
Non-ren. secondary fuels	MJ	3,51E-22	0,00E+00	0,00E+00	3,51E-22	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Use of net fresh water	m ³	2,15E-02	1,22E-04	4,04E-03	2,56E-02	1,89E-04	4,71E-05	MND	0,00E+00	1,82E-05	1,75E-04	2,29E-05	-3,39E-03						

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	С3	C4	D
Hazardous waste	kg	6,96E-01	2,08E-03	5,74E-03	7,04E-01	2,01E-03	1,34E-03	MND	0,00E+00	1,94E-04	3,00E-03	2,44E-05	-4,58E-01						
Non-hazardous waste	kg	9,35E+00	3,07E-02	9,48E-02	9,47E+00	4,24E-02	2,06E-01	MND	0,00E+00	4,10E-03	8,26E-02	5,57E-04	-3,62E+00						
Radioactive waste	kg	3,08E-04	2,19E-07	4,57E-05	3,54E-04	4,46E-07	1,89E-08	MND	0,00E+00	4,31E-08	5,75E-07	3,43E-09	1,11E-05						



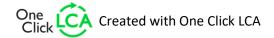
END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	2,34E-06	0,00E+00	0,00E+00	2,34E-06	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Materials for recycling	kg	1,19E-01	0,00E+00	0,00E+00	1,19E-01	0,00E+00	1,93E-03	MND	0,00E+00	0,00E+00	8,32E-01	0,00E+00	0,00E+00						
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,06E-01	MND	0,00E+00	0,00E+00	5,10E-01	0,00E+00	0,00E+00						

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	С3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	4,14E+00	1,23E-01	4,38E-02	4,31E+00	9,84E-02	5,35E-03	MND	0,00E+00	9,51E-03	5,95E-02	8,99E-04	-1,42E+00						

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.







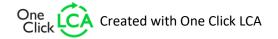
APPENDIX 1. ADDITIONAL ENVIRONMENTAL INFORMATION

CLIMATE IMPACT VARIATION IN BSV2 & BSV5 SERIES (MODULES A1-A3)

The table below presents the total climate impact results for modules A1-A3 (Cradle-to-gate) for all sizes in the EKO-BSV2 and EKO-BSV5 series. Variation in impact is due to differences in material composition and size. GWP-TOTAL, GWP-FOSSILS, and GWP-GHG each show an approximate 20% difference between their highest and lowest values, measured per kilogram of self-actuating backflow protector.

Article	Dimension	GWP-Total (A1-A3) [kg CO2-eq/kg]	Article weight [kg/piece]	GWP-Total (A1-A3) [kg CO2-eq per 1 piece]
EKO-BSV2	100	3,94	1,07	4,21
EKO-BSV2	125	4,01	1,32	5,31
EKO-BSV2	160	4,08	1,84	7,49
EKO-BSV2	200	4,06	2,93	11,90
EKO-BSV2	250	3,44	4,40	15,13
EKO-BSV2	315	3,44	6,77	23,28
EKO-BSV5	100	4,26	1,85	7,87
EKO-BSV5	125	4,26	2,28	9,73
EKO-BSV5	160	4,27	3,05	13,04
EKO-BSV5	200	4,31	4,90	21,13
EKO-BSV5	250	3,78	7,17	27,12
EKO-BSV5	315	3,73	10,23	38,17

RESULTS GWP-TOTAL FOR ALL DIMENSIONS





RESULTS GWP-FOSSIL FOR ALL DIMENSIONS

Article	Dimension	GWP-Fossil (A1-A3) [kg CO2-eq/kg]	Article weight [kg/piece]	GWP-Fossil (A1-A3) [kg CO2-eq per 1 piece]
EKO-BSV2	100	3,98	1,07	4,25
EKO-BSV2	125	4,05	1,32	5,36
EKO-BSV2	160	4,12	1,84	7,57
EKO-BSV2	200	4,1	2,93	12,01
EKO-BSV2	250	3,48	4,40	15,30
EKO-BSV2	315	3,47	6,77	23,48
EKO-BSV5	100	4,3	1,85	7,94
EKO-BSV5	125	4,3	2,28	9,82
EKO-BSV5	160	4,31	3,05	13,16
EKO-BSV5	200	4,35	4,90	21,32
EKO-BSV5	250	3,82	7,17	27,41
EKO-BSV5	315	3,77	10,23	38,57

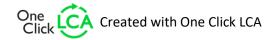
RESULTS GWP-GHG FOR ALL DIMENSIONS

Article	Dimension	GWP-GHG (A1-A3) [kg CO2-eq/kg]	Article weight [kg/piece]	GWP-GHG (A1-A3) [kg CO2-eq per 1 piece]
EKO-BSV2	100	3,98	1,07	4,25
EKO-BSV2	125	4,06	1,32	5,37
EKO-BSV2	160	4,13	1,84	7,58
EKO-BSV2	200	4,11	2,93	12,04
EKO-BSV2	250	3,49	4,40	15,35
EKO-BSV2	315	3,48	6,77	23,55





EKO-BSV5	100	4,3	1,85	7,94
EKO-BSV5	125	4,31	2,28	9,85
EKO-BSV5	160	4,32	3,05	13,19
EKO-BSV5	200	4,35	4,90	21,32
EKO-BSV5	250	3,83	7,17	27,48
EKO-BSV5	315	3,77	10,23	38,57





VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance. I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited 17.02.2025



